

SUMMARY OF SOIL SURVEYS AND LAND CLASSIFICATIONS GILA RIVER INDIAN RESERVATION

YEAR	NAME OF SURVEY OR CLASSIFICATION	SURVEY OR CLASSIFICATION RESULTS (ACRES)	REMARKS	
	NATURAL RESOURCES CONSERVATION SERVICE (AND PREDECESSOR AGENCIES)			
1917	Soil Survey of the Middle Gila Valley Area	Irrigated Lands on the GRIR = 9,000 Classified on the GRIR = 20,000 Classified Outside of the GRIR = 200,000 Total Classified = 229,000	The Bureau of Soils, United States Department of Agriculture (USDA), performed this soil survey of the middle Gila River valley extending from 5 miles northeast of Florence, Arizona branching westward and southwestward. The majority of the surveyed lands were in Pinal County and 2 square miles in Maricopa County. ADWR has estimated from the survey map that 20,000 acres were classified within the GRIR.	
1931	Irrigable Area Classification, Gila River Indian Reservation, Arizona	Irrigable Land = 24,619 Temporarily Non-Irrigable Land = 9,869 Non-Irrigable Land = 14,272 Subtotal Non-Irrigable Land = 24,141 Total Classified = 48,760	The Bureau of Chemistry and Soils, USDA, classified San Carlos Irrigation Project lands located within the Reservation. The survey covered 48,760 acres out of 53,225 acres encompassed by the project.	
1932	Irrigable Area Classification, Gila River Indian Reservation, Arizona	San Carlos Irrigation Project Lands Irrigable Land = 23,424 Temporarily Irrigable Land = 6,918 Subtotal Irrigable Land = 30,342 Temporarily Non-Irrigable Land = 4,780 Non-Irrigable Land = 16,282 Subtotal Non-Irrigable Land = 21,062 Total San Carlos Irrigation Project = 51,404	The Bureau of Chemistry and Soils classified San Carlos Irrigation Project lands located within the GRIR; contiguous Reservation lands on the southern and western edges of the San Carlos Irrigation Project were also classified.	
1936	Land Classification (Reconnaissance) Gila River Indian Reservation, Arizona	Class 2 Land = 5,880 Class 3 Land = 34,762 Class 4 Land = 139,003 Total Classified = 179,645	The Soil Conservation Service (SCS), USDA, performed this reconnaissance land classification in cooperation with the Bureau of Indian Affairs (BIA), United States Department of the Interior. The acreage for each land classification was determined by ADWR using GIS and the map of the reconnaissance classification.	
1936	Land Classification (Detailed) Gila River Indian Reservation	Suitable Lands = 4,800 Temporarily Unsuitable Land = 8,250 Unsuitable Land = 10,500 Subtotal Unsuitable Lands = 18,750 Total Classified = 23,550	The SCS performed this detailed land classification in cooperation with the BIA. The area was that classified was located in the northwest portion of the Reservation. The acreage was taken from a map prepared by the BIA, which utilized the Bureau of Chemistry and Soils 1932 classification and the 1936 SCS reconnaissance land classification to create a composite land classification map for the GRIR (Refer to the section pertaining to the United States Bureau of Indian Affairs on the next page).	

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	NATURAL RESOURCES CONSERVATION SERV	VICE (AND PREDECESSOR AGENCIES) (Continued)
Land Suitability Gila River Indian Reservation, Pinal and Maricopa Counties, Arizona	Class A Land = 198,927 Class B Land = 45,542 Class C Land = 45,439 Total Class A, B, and C Land = 289,909 Class D Land = 81,992 Total Classified = 371,900	The SCS prepared a land suitability map for the Gila River Indian Reservation. The map was developed as part of cooperative agreement between the Soil Conservation and the Gila River Indian Community to provide the community with information for comprehensive planning. The acreage values were obtained from a 2 page SCS report on this classification. The classifications are described below: Class A - Nearly level land suitable for irrigation agriculture Class B - Gently sloping lands suitable for irrigation agriculture Class C - Nearly level saline and alkali land Class D - Lands not generally suitable for irrigation agriculture The BIA prepared a similar map using this information for the Community's statements of claimant. Refer to the BIA section below.
Soil Survey of the Gila River Indian Reservation, Arizona, Parts of Maricopa and Pinal Counties	Class I, III = 30,623 Class II = 148,755 Class II, III = 23,909 Class III = 18,778 Class III, IV = 21,219 Class IV = 9,064 Total Classes I - IV = 252,348 Non-Arable Classes = 121,324 Total Classified = 373,672	The Natural Resources Conservation Service prepared soil survey maps for the entire Gila River Indian Reservation. The land capability classification provides an indication of the soils ability to sustain various types of land uses, including growing crops. The classifications do not take into economic or financial considerations in developing the land for an irrigation project.
	UNITED STATES BURE	EAU OF INDIAN AFFAIRS
San Carlos Project Indian Land Designation	Irrigable Land Within Project = 22,549 Temporary Irrigable Land Within Project = 4,620 Subtotal Irrigable Land Within Project = 27,169 Non-Irrigable Land Within Project = 22,411 Temporary Non-Irrigable Land Within Project = 5,420 Subtotal Non-Irrigable Land Within Project = 27, 831 Total Classified = 55,000	This land designation was prepared by John F. Truesdell, USDI, presumably in support of the United States position in the Globe-Equity Decree deliberations. Acreages were considered approximations until the Bureau of Chemistry and Soils completed their final report. No final report has been found by ADWR.
Maricopa District, Cooperative and Gila Crossing Areas and Santa Cruz Area Land Classification	Subtotal Irrigable Land	A survey of the Maricopa District, Cooperative and Gila Crossing Areas, and the Santa Cruz Area was performed by the Office of Indian Affairs, Irrigation Division, Agricultural Economics Unit, USDI, in 1936. The information was found in the United States Temporary Exhibit No. 74, Arizona v. California.
	Gila River Indian Reservation, Pinal and Maricopa Counties, Arizona Soil Survey of the Gila River Indian Reservation, Arizona, Parts of Maricopa and Pinal Counties San Carlos Project Indian Land Designation Maricopa District, Cooperative and Gila Crossing Areas and Santa Cruz Area	Class A Land = 198,027

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	UNITED STATES BUREAU OF INDIAN AFFAIRS (Continued)			
1936 (?)	Soil Classification	Suitable Land = 30,300 Temporarily Unsuitable Land = 4,800 Unsuitable Land = 16,300 Subtotal Unsuitable Land = 21,100 Total 1932 Survey = 51,400 Total 1932 Survey = 51,400 Suitable Land = 4,800 Temporarily Unsuitable Land = 4,800 Temporarily Unsuitable Land = 8,250 Unsuitable Land = 10,500 Subtotal Unsuitable Land = 18,750 Total 1932 Survey = 23,550 Summary	The BIA prepared a composite map utilizing 3 prior land classifications listed below: 1. 1932 Bureau of Chemistry and Soils Irrigable Area Classification 2. 1936 SCS Detailed Survey 3. 1936 SCS Reconnaissance Land Classification. However, only the results of the 1932 classification and the 1936 detailed survey are shown on the map. The differences in acreage values for the 1932 classification shown on the map and what was shown in the Bureau of Chemistry and Soils 1932 report are unknown.	
		Total Suitable Land = 35,100 Total Unsuitable Land = 39,850 Total Classified = 74,950		
1941	Land Classification of San Carlos Irrigation Project, Arizona	Lands Lying to the East of the Old Arizona and Eastern Railroad Alignment - San Carlos Project Area Excellent Agricultural Land = 4,966 Good Agricultural Land = 43,102 Fair Agricultural Land = 12,976 Poor Agricultural Land = 5,586 Very Poor Agricultural Land = 13,498 Subtotal Agricultural Land = 80,128 Land Not Suited For Irrigation = 58,518 Total Classified = 138,646 Lands Lying to the West of the Old Arizona and Eastern Railroad Alignment - In the Vicinity of Broadacres and Lone Butte Areas Excellent Agricultural Land = 0 Good Agricultural Land = 7,810 Fair Agricultural Land = 7,810 Fair Agricultural Land = 4,380 Poor Agricultural Land = 290 Very Poor Agricultural Land = 700 Subtotal Agricultural Land = 13,180 Land Not Suited For Irrigation = 25,360 Total Classified = 38,540 Summary Total Agricultural Land = 93,308 Total Land Not Suited for Irrigation = 83,878 Total Classified = 177,186	This land classification was prepared by the Office of Indian Affairs, Irrigation Division, Agricultural Economics Unit, USDI. The land classification covered 138,646 acres on the Reservation (Project lands and lands to be considered for irrigation) located to the east of the old Arizona and Eastern Railroad alignment and 50,000 acres of non-Indian Project lands. This classification was also described in a 1944 report entitled "Report on Economic Conditions Existing on the San Carlos Irrigation Project and the Gila River Indian Reservation, Arizona" prepared by the Office of Indian Affairs, Irrigation Division, Agricultural Economics Unit, USDI (informally called the "Walker Report"). An additional 38,540 acres of land located to the west of the old Arizona and Eastern Railroad alignment in the vicinity of the Broadacres and Lone Butte Areas were also classified. Information for both classifications was found in the United States Temporary Exhibit No. 74, Arizona v. California.	
1955/1956	San Carlos Irrigation Project Land Classification	Class I Land = 11,264 Class II Land = 19,869 Class III Land = 14,615 Class IV Land = 4,798 Total Classified = 50,546	This land classification of the Indian portion of the San Carlos Irrigation Project was prepared by the BIA in connection with evidence submitted by the United States in Arizona v. California. The acreage information was taken from the Bureau of Reclamation, USDI, report entitled 'Report on Buttes Dam and Reservoir, Middle Gila River Project, Arizona, Project Development Report' dated November 1960. The lands surveyed were those that were presently developed for irrigation plus 8,000 acres of immediately contiguous land. The BIA did not issue a report presenting the findings of the survey.	

SUMMARY OF SOIL SURVEYS AND LAND CLASSIFICATIONS GILA RIVER INDIAN RESERVATION

	UNITED STATES BUREAU OF INDIAN AFFAIRS (Continued)			
1956/1957	Maricopa District and Gila Crossing District Land Classification	Maricopa District	ADWR obtained a set of 2 maps showing the land classifications for the Maricopa District (November 1956) and the Gila Crossing District (February 1957). It appears that these maps were prepared as evidence in Arizona v. California in the United States' Exhibit No. 1822 and/or the United Sates Court of Claims, Indian Claims Commission as exhibits (Docket No. 236-D).	
1980	Exhibit No.3B Gila River Indian Reservation, Pinal and Maricopa Counties, Arizona Preliminary Water Use Plan	Total Classified = 4,418 Class A, B, and C Lands (Irrigable Land) = 283,555 Class D Land (Non-Irrigable Land) = 88,467 Total Classified = 372,022	This was an exhibit submitted as part of the Gila River Indian Community's statements of claimant. The Community based its practicably irrigable acreage claim on the acreage amounts shown on the map. The map also shows a deduction of 6% - 17,013 acres - for roads, ditches, farmsteads, fences, etc., resulting in a net irrigable area of 266,542 acres.	
		UNITED STATES BUR	EAU OF RECLAMATION	
1958	Land Classification of the San Carlo s Project within the Middle Gila Project Area	Class 1 Arable Land = 18,854 Class 2 Arable Land = 19,623 Class 3 Arable Land = 1,346 Subtotal Arable Land = 39,823 Class 6 Non-Arable Land = 407 Total Classified = 40,230 Other Land = 10,316 Total Indian Land = 50,546	The United States Bureau of Reclamation (USBR) classified 100,546 acres of San Carlos Irrigation Project lands; 50,000 acres were classified on non-Indian project lands, and 50,546 acres of project lands were classified on the Gila River Indian Reservation. This classification was done for the Buttes Dam and Reservoir, Middle Gila River Project and reported in the "Project Development Report" dated November 1960. The "Other Lands" category includes land that had not been developed for irrigation and/or land used for roads, canals, subdivisions, cotton gin yards, and other non-farm purposes.	
1972	Central Arizona Project Land Classification	San Carlos Irrigation Project Land Class 1 Arable Land = 22,501 Class 2 Arable Land = 22,561 Class 3 Arable Land = 1,831 Subtotal Arable Land = 46,893 Class 6 Non-Arable Land = 620 Right-of-Way and "H" (Suburban or Homestead) = 3,033 Subtotal Non-Arable or Other = 3,653 Total San Carlos Irrigation Project = 50,546 Lands Outside of the San Carlos Irrigation Project Class 1 Arable Land = 8,689 Class 2 Arable Land = 9,007 Class 3 Arable Land = 6,472 Subtotal Arable Land = 24,168 Class 6 Non-Arable Land = 1,140 Right-of-Way and "H" (Suburban or Homestead) = 665 Subtotal Non-Arable or Other = 1,805 Total Lands Outside the San Carlos Irrigation Project = 25,973 Total Arable Land = 71,061 Total Non-Arable Land = 1,760 Total Right-of-Way and "H" = 3,698 Total Classified = 76,519	The USBR classified 1,206,919 acres of land in Maricopa and Pinal Counties using data from 6 previously conducted soil surveys The results of this effort were published in the Central Arizona Project Definite Plan Report, Appendix F- Project Lands", dated May 1972. Of the total lands classified, 100,546 acres were San Carlos Irrigation Project lands, which included 50,546 acres of Gila River Indian Reservation land. Another 25,973 acres were also classified on the GRIR west of the SCIP lands. The 50,546 acres is a combination of two surveys. The first survey classified a total of 90,230 acres of land, which included the 40,230 acres of the Gila Indian Reservation lands. This survey was performed in 1958 for the USBR's Buttes Dam and Reservoir Middle Gila River Project Report, which was discussed previously. The second survey, which classified 10,316 acres, was performed in 1972 in response to a Bureau of Indian Affairs document entitled "Land Designation, Gila River Indian Reservation, San Carlos Irrigation Project, Indian Works, Pima Agency", dated July 1968. A third survey consisted of 25,973 acres of lands classified along the Gila River within the boundaries of the Gila River Indian Reservation. These lands were classified during 1966 as part of the USBR's modified detailed land classification of 833,266 acres of land within Maricopa and Pinal Counties having a history of irrigation.	

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		UNITED STATES BUREAU (OF RECLAMATION (Continued)
1979-1988	Gila River Indian Reservation Land Suitability Classification	Class 1 Arable Land (D1 + R1) = 34,138 Class 2 Arable Land (D2 + R2) = 83,607 Class 3 Arable Land(D3 + R3) = 53,379 Irrigation ("IR") Class = 2,705 Subtotal Arable Land = 173,829 Class 4 Land (R4) = 30,096 Class 6 Non-Arable Land (D6 + R6) = 169,743 Subtotal Non-Arable = 199,839 Total Classified = 373,668	The USBR developed a series of 14 map plates in 1979 depicting a preliminary reconnaissance and detailed land classification for the GRIR. This effort was presumably done as first step in certifying these lands for receipt of the Community's allocation of Central Arizona Project water. A set of similar maps are shown in the Community's 1985 "Master Plan Report for Land and Water Use" which is discussed on the next page. ADWR obtained a set of 21 United States Geological Survey 7.5 minute quadrangle maps that appear to be the basis for the USBR 1979 and 1985 maps described above and for digital data (dated 1988) obtained from the Salt River Project (SRP). These maps encompass the entire Reservation determined to be 373,668 acres from the digital data. The amount of land classified as arable (Classes 1-3) from this data is 173,829 acres. It should be emphasized that at the time ADWR obtained this classification, the USBR has not yet issued a report for their land classification and has not formally certified these lands, thus the numbers are considered to be preliminary.
1993	Sacaton Ranch South Irrigation Suitability Land Classification	Class 1 Arable Land = 0 Class 2 Arable Land = 5,509 Class 3 Arable Land = 791 Subtotal Arable Land = 6,300 Class 6 Non-Arable Land = 593 Total Classified = 6,893	The USBR completed the "Sacaton Ranch South, Gila River Indian Community, Irrigation Suitability Land Classification Report" in July 1993. This Report is a supplement to the Central Arizona Project Definite Plan Report: Appendix F - Project Lands discussed previously. The study area for this land classification encompassed 6,893 acres of SCIP lands that were not covered in 1972 USBR classification.
		UNITED STATES DEF	PARTMENT OF JUSTICE
2002	Irrigation Suitability Land Classification Gila River Indian Reservation	Furrow Acres Class 1 Land = 9,230 Class 2 Land = 28.967 Class 3 Land = 104,285 Class 4 Land = 28,861 Subtotal = 171,343 Class 6 Non-Arable Land = 83,737 Total Classified = 255,080 Basin Acres Class 1 Land = 9,230 Class 2 Land = 26,739 Class 3 Land = 73,206 Class 4 Land = 20,883 Subtotal = 130,059 Class 6 Non-Arable Land = 125,021 Total Classified = 255,080 Sprinkler Acres Class 1 Land = 11,196 Class 2 Land = 33,422 Class 3 Land = 99,94 Class 4 Land = 28,052 Subtotal = 172,665 Class 6 Non-Arable Land = 82,415 Total Classified = 255,080 Class 6 Non-Arable Land = 82,415 Total Classified = 255,080 Class 6 Non-Arable Land = 82,415 Total Classified = 255,080 Class 6 Non-Arable Land = 82,415 Total Classified = 255,080 Class 6 Non-Arable Land = 82,415 Total Classified = 255,080	The United States Department of Justice (DOJ), in cooperation with BIA, retained Soil and Water West, Inc. to conduct a feasibility level irrigation suitability classification of selected areas of the GRIR. The study evaluated 255,080 acres of land; not all Reservation lands were classified. The following lands were omitted: • Lands that were presently irrigated at the time of the classification • Lands within SCIP • Lands that are culturally and archaeologically significant • Urban area and major rights of way • Mountains and hills. The study followed BOR's irrigation suitability land classification procedural manual.
		,	l DIAN COMMUNITY
1985	Gila River Indian Community Master Plan Classification	Class 1 Land = 40,000 Class 2 Land = 73,000 Class 3 Land = 46,000 Class 3 or Class 6 = 7,000 Total Classified = 166,000	In 1985, the Gila River Indian Community released the "Master Plan Report for Land and Water Use". The Master Plan utilized previous USBR land classification studies (including preliminary) to classify 166,000 acres of land for irrigation use. These studies were: YEAR
2003	Gila River Indian Community Statements of Claimant	Existing Non-Agricultural = 13,759 Proposed Conversion Land = 47,026 Proposed Monument = 2,010 Interim Mesquite Plantation = 22,160 Riparian Mesquite = 14,293 Mesquite Plantation = 25,430 Permanent Irrigated Agriculture = 189,349 Desert Range = 72,718 Total Land Uses = 364,675 Total Agricultural Land (Permanent Irrigated Agriculture, Mesquite Plantations, and Riparian Mesquite) = 251,232	In 2003, the Gila River Indian Community (GRIC) amended 6 statements (SOCs) of claimants and filed 2 new SOCs. Each of these SOCs contained a map (Map #2) showing the Community's proposed agricultural and non-agricultural land uses. The sources cited on the map are: Bureau of Reclamation – Certified Soil Survey, Franzoy-Corey Survey – 1978, and Gookin Engineers. The written narrative that accompanied the SOCs state that GRIC intend to utilize mesquite plantations to reclaim saline/sodic soils on the Reservation and provide mesquite wood and seed products.

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	ARIZONA DEPARTMENT OF WATER RESOURCES		
1996	Preliminary Hydrographic Survey Report for the Gila Indian Reservation Watershed File Report No. L8-8-001 In Re The General Adjudication of the Gila River System and Source	Arable Land = 185,210 High Risk Arable Land = 21,200 Not Feasible Land = 37,140 Non-Arable Land = 113,117 Total Classified = 356,667 Total Arable Land = 206,410 Arable Lands with Non-Agricultural Uses = 9,470 Net Arable Land = 196,940	The Arizona Department of Water Resources utilized information from a preliminary soil survey prepared by the United States Natural Resources Conservation and an uncertified land classification study prepared by the United States Bureau of Reclamation to develop a simplified land classification system. The amount of net developable was based the assumption that approximately 9% of the arable land would have to be used for farm roads, canals, and ancillary farm structures.
1999	Preliminary Hydrographic Survey Report for the Gila Indian Reservation In Re The General Adjudication of the Gila River System and Source	Net Developable Arable Land = 178,770 Unconstrained Arable Land = 175,429 Arable Land with Non-Agricultural Land Uses = 11,153 Arable Land with Flood Plain Constraint = 48,909 Arable Land with Location Constraint = 16,542 Arable Land with Slope Constraint = 315 Non-Arable Land = 121,324 Total Classified = 373,672 Total Arable Land = 252,348 Arable Lands with Non-Agricultural Uses = 11,153 Net Arable Land = 241,195	The Arizona Department of Water Resources utilized information from the 1998 soil survey for the GRIR prepared by the United States Natural Resources Conservation to develop a simplified land classification system. The system was used to estimate the number of developable arable land on the reservation.